



Impact of drought on the spatial pattern of transmission of *Schistosoma haematobium* in coastal Kenya

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Abstract:

We analyzed temporal changes in spatial patterns of active *Schistosoma haematobium* infection in different age groups and associated them with ponds infested with *Bulinus* snails. A major drought between 2001 and 2009 resulted in drying of ponds that were known sources of infection, and we detected very few or no snails in ponds that were infested in the past. The household-level spatial pattern of infection for children of various age groups in 2009 was contrasted with historical data from 2000. The significant local clustering of high- and low-infection levels among school-aged children that occurred in 2000 was absent in 2009. We attribute the disappearance of significant clustering around historical transmission hot spots to a decade-long drought in our study area. The implications of extreme weather and climate conditions on risk and transmission of *S. haematobium* and their relevance to control strategies are discussed.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Extreme Weather Event

Extreme Weather Event: Drought

Geographic Feature:

resource focuses on specific type of geography

Freshwater

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Africa

African Region/Country: African Country

Other African Country: Kenya

Climate Change and Human Health Literature Portal

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Foodborne/Waterborne Disease

Foodborne/Waterborne Disease: Schistosomiasis

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Mitigation

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Children

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content